

1%CLUB Research report

What are the challenges and opportunities for the use of ICT and New Media by local NGOs and CBOs in the field of international development cooperation

A Ugandan Case Study



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1. Introduction

"Information technology, together with the ability to use it and adapt it, is the critical factor in generating and accessing wealth, power, and knowledge in our time". –Manuel Castells

As part of my thesis of the New Media and Digital Cultures masters study at the University of Amsterdam, I have conducted research for the 1%CLUB between January and August of 2009. Together with the ICT4Uganda.net research team, all New Media students, we made a trip to Uganda to explore the social impact of ICTs and New Media in Uganda from 5 interdisciplinary perspectives. My main aim has been to identify where and how New Media and ICTs can be implemented and used by local NGOs (Non Governmental Organizations) and CBOs (Community Based Organizations) working within the development cooperation sector. In total I have conducted 6 weeks of field research in Uganda, in which I visited 14 relevant NGOs/CBOs and interviewed at every visit at least one representative of that organizations. In the conversations I had during the research period I was mainly curious about the work that the organization is doing and what their problems and challenges are in achieving their goals successfully. I also asked questions related to their use of ICTs and New Media and the potential for ICT use they envision. Ultimately, seeking answers to the following research question:

"What are the challenges and the opportunities for the use of ICT and New Media by local NGO's and CBO's within the field of international development cooperation?"

This document reports the findings to this research question extensively. After the introduction and the summary of the findings, the second chapter will consist of a background study on the use of ICTs for development and the use of ICTs in Uganda. This will give a global view on the framework in which this research has been placed. In chapter three the analysis of the Ugandan case studies is made. Here many observations, experiences and expressed needs will be discussed extensively. This results in a conclusion to my research question in chapter four. The fifth chapter is dedicated to answering specific questions asked by the 1%CLUB staff. This question & answer chapter sheds light on mainly issues concerning the adaptability of the 1%Concept in East Africa. Finally, chapter six is an appendix in which tables referred to in the report are presented and the case studies have been completely worked out.

What I have mainly found is that ICTs and New Media are being increasingly implemented to empower and mobilize the people of Uganda through providing the means to access and share information. A development approach often taken by NGOs and CBOs is setting up telecenters and providing ICT skills training to promote ICT use and improve ICT literacy. But it's shown that people often need encouragement to actively make use of their newly acquired skills and to integrate ICT use into their daily lives. As I found, they can be encouraged by implementing innovative hardware solutions that assist in overcoming physical factors which strain the use of ICTs¹. For example solar panels, durable low maintenance machines and WiFi connection systems. Secondly, by implementing knowledge and information sharing platforms in the form of collaborative and/or social web 2.0 applications will assist in overcoming social factors straining the integration of ICTs into the

¹ See table 1 for complete overview of social and physical factors.

daily lives of the people. But, NGOs and CBOs providing and maintaining a platform of this kind have expressed the strong need for effective content management and needs extraction tools in order to assist their users better.

Next to web based and innovative hardware approaches, mobile phones and SMS also pose as viable solutions for development to be utilized by NGOs and CBOs within the development framework. As I found, the mobile phone and SMS can be functionally used as medium to provide and gather information to and from the public. The largest advantage is that many people own mobile phones meaning these services could be scaled nationwide. Also, the range of possible applications is very diverse, as I came across applications providing on demand information related to the weather, health, transport, agriculture and market prices. Yet a challenge posing the development and widespread utilization of these types of applications is that local telecom providers don't have the technical capacity to sustain social, advanced and highly functional mobile applications. Another issue noted is that organizations often keep their developed applications proprietary, meaning that other, less funded organizations could not benefit from its uses. Therefore the need for open source applications is expressed in order for anyone to adopt and adapt the applications. Finally, for the use of mobile phones and applications for development to reach its critical mass, additional technologies and services need to be implemented in parallel. These technologies include cheap solar mobile chargers and mobile banking applications; this will give people in the furthest corners of Uganda access to financial flows wherever and whenever.

I came across an internationally and cooperation orientated development approach, where organizations act as the mediating organ between (local) development work and (international) development workers. Because of this orientation, a strong need has been expressed for an integrated (web) service through which the mediation process of the organization is sustained. The service would have to provide the possibility for international volunteer exchange, funding, and exposure, and the means for monitoring, evaluating, and advocating for development projects. Finally, I witnessed that many local NGOs and CBOs work in parallel to each other, while seeking the same goals, partnerships and carrying out similar organizational activities. The need for a centralized NGO/CBO registry system or directory is therefore expressed, where these organizations could gain exposure, find each other and seek partnerships.

2. Background study

2.1. ICT for development cooperation

It has always been a crucial challenge for the contemporary development community to close the structural gap between the supply and demand side of assistance. Past models of international development proved to not always be executed as efficient and effectively as planned. But the international development community is undergoing significant changes which mark a new era of global action on poverty. An era marked by new types of development cooperation through the promising and potential uses of New Media and ICTs which empower people to access and share knowledge and information to a greater extent than ever before. In Africa more and more people gain access to electronic communications technologies like mobile phones and the Internet, making way for possibly more effective methods for delivering aid, fighting poverty and international development work in general. As governments and organizations within the field of development cooperation anticipate on these changes, the global aim is to ultimately close the gap between the supply and demand of assistance and increase the effectiveness of development cooperation significantly. New structures for development cooperation are thus being formed through the research, development and utilization of these new technologies; structures which are centered on the concepts of locally adapted technologies, automated information delivery systems, social networking, massive collaboration, crowd sourcing, collective intelligence, transparency and equally important, individual responsibility. Structures identified under the name Development Cooperation 2.0.

2.2. ICT in Uganda

Africa is fast embracing Information and Communication Technologies. The continent is experiencing a mobile phone revolution that now defines the continent's potential. In a span of ten years, more than one third of the African population has gained access to the mobile network. The mobile phone industry in Africa is growing at twice the global rate and remains the fastest growing mobile phone market in the world. This growth is also reflected in the spread of Internet connections that have increased by 1,031.2 % between 2000 and 2008. (UN World Investment Report, The International Telecommunications Union (ITU), Internet World Stats – June 2008). Internet connectivity is growing faster than anywhere else in the world and significant investments in fiber optic cables and satellite technologies promise to accelerate the process. The breakneck pace of development in African connectivity recognizes important changes taking place on the ground.

Over the past decade mobile phones and services have taken Uganda by storm. Thanks to the ease in getting a prepaid phone number and the relatively cheap phone prices and phoning costs, mobiles have penetrated the largest part of the population. According to official reports there were 8,554,864 registered mobile phone users in 2008, which corresponds to a 30% population use penetration. The mobile phone has provided people, ranging from the densely populated cities to rural communities, with the powerful and life influencing means of distanced communication. With around 2200 masts and signal stations across the country the network coverage in Uganda has reached 100%, meaning every part of the country should have access to a particular mobile provider.

Compared to mobile phone use, internet is still behind in use penetration. The low amount of landlines makes for the high provision and availability of wireless internet connections. In 2008 there were a total of 214,293 active mobile wireless internet accounts compared to 22,000 fixed line internet subscriptions. There are 2,5 million estimated internet users in Uganda in 2009. This is a population use penetration of 6,4%. Yet 4% of the population owns a personal computer, 3,5% of the population in urban areas and 0,1% of the population in rural areas.

Table: Internet use in Uganda (Source: ITU)			
Year	Users	Population	Penetration
2000	40000	24,400,000	0.1%
2006	500000	28,574,909	1.7%
2007	750000	30,262,610	2.5%
2008	2000000	31,367,972	6.4%

These developments have opened-up new doors for information access and sharing. And so, many organizations within the development sector have focused their efforts on making use of these opportunities.

3. Case study analysis

During my research trip to Uganda in May, June and July of 2009, I visited 14 NGOs and CBOs within the development sector. These visits have led to 14 case studies² in which I describe the background of the work conducted by that organization, the activities they are carrying out and a list of the challenges they face. Next to that I have also given special attention to how they (envision to) utilize ICTs and New Media and how that relates to their challenges. Data and information was collected in Uganda through informal conversations and interviews. Projects proposals, organization descriptions and websites of these organizations also served as information input for the case studies. In this chapter I will report my personal experiences and major findings related to the research question.

3.1. The importance of accessing and sharing information

The first week I was in Uganda I visited the CBO KIFAD in Kampala. There I had a talk with Bob Bongole and John Kibuuka who explained me all about the work KIFAD does and the problems they face. They underlined the importance of their beneficiaries, and Ugandans in general, having *access to information* and for them to be able to *share information*. Bob works with KIFAD to support the people in his community infected and affected by HIV/AIDS, just like many other organizations in the country. This work involves counseling, guiding and providing important information to people in the community. But providing this help and information is currently very limited he explains³; KIFAD has a paper based library where members of the community can find information (often not in local languages) and hosts a meeting every month where all the beneficiaries of KIFAD come to the office to get informed on important issues and to share personal experiences with each other. Providing information and guidance this way is very inefficient and the sharing of information between the community members is an exhaustive process: “people still have many questions, seek much information and have much to share”. Instead of using these traditional methods Bob sees a high relevancy in *training* his community members to use the computer and the internet so they can find this information themselves or that KIFAD can provide it digitally for them. He also envisions using *Social Networking* and *innovative mobile phone applications* so people can access and share information and experiences with each other and can connect with each other easily in real time. These ICT solutions would save money (transportation, printing costs etc), give aid quicker (when someone is sick they could communicate digitally and guidance could be given instantly) but most importantly provide the means for people to let their voices be heard and become empowered through ICTs.

When I visited a community meeting on a Saturday morning I asked who out of the group of beneficiaries (approximately 40 adults) uses computers or the internet. It was interesting to hear that none of them owned, uses or knows how to use a computer. People are either too poor to buy one, they don't see relevancy in learning something new, and above all electricity most often doesn't reach them or they cannot pay the costs. They did ask me how their children could start using these technologies. For me, this was a typical and important finding which clearly reflects the status of ICT use throughout (rural) Uganda.

² See appendix case studies

³ See appendix Table 1: *social* and *physical* factors



Fig. X: Beneficiary meeting at KIFAD

Just like Bob and John from KIFAD, many other NGOs and CBOs see relevancy and benefit in utilizing ICTs for their development work. Yet the problem facing this, with the situation at KIFAD as a prime example, is that there is a very low level of *ICT use penetration and literacy* throughout Uganda, apart from the basic use of mobile phones⁴. Therefore a large focus is put on setting up *telecenters* throughout the country and providing *ICT skill training* to the people. What KIFAD was planning, ChangeIT!, Wougnet and Warchild Holland were already doing.

3.2. The need for telecenters and ICT skills training

There is a common belief that an increase in the level of knowledge of the people contributes to the sustainable development of the country; providing people with computer skills increases their ability to access and share information and to communicate and collaborate with each other, thereby *mobilizing* and *empowering* them in improving their living conditions. When I visited Milton Aineruhanga from Wougnet he explained to me that Wougnet supports the use of ICTs among Ugandan woman as tools to share information and address issues collectively. They provide ICT skills training to woman in order to empower them. They also set up telecenters to provide people with computers, internet and all the technical means that provide access to digital information and communication. In a short talk, Ans de Jager from Warchild Holland explained the same scenario in a different context; Warchild Holland works to utilize ICTs to grant children in war affected areas of Northern Uganda increased access to education. And when I met with Charles Musule from ChangeIT! at his office in Kampala, he explained to me that ChangeIT! sets up telecenters throughout the country where students and community members can be trained in computer skills and are given access to information and means of communication. The formula is simple: set up a telecenter, provide computer skills training, and improve information access and communication to thus contribute to the increase in the level of their knowledge and the

⁴ 30% of the populations own mobile phones and 6,4% of the population are registered internet users.

empowerment of the people and the development of their country. But there are problems encountered that are worth to be noted when following this, now mainstream, approach.

3.3. The need for encouragement

An important issue rose in every of the above mentioned conversation, was the actual *lasting effect of the ICT skills training* provided. What has been identified many times is that after following an ICT skills training, people often aren't *encouraged* enough to keep putting their newly learned abilities into practice. And it is very often the case that people tend to drop back into their day to day lives without using their acquired skills which should actually increase their knowledge and empower them more. Charles from ChangeIT! and Milton from Wougnet have explained to me clearly that they have noticed that people have a strong need *to get encouraged* to make use of their skills after their training, to make these skills their own and to integrate ICTs into their daily lives so they can benefit the advantages. Physical factors like high prices for internet access and power, slow internet connection speeds and the absence of computers and the electricity grid also play a large role in this issue⁵. *Overcoming these factors* will, as I heard over and over again, increases the affectivity of the skills training and integration of ICT into peoples' daily lives greatly. Next to that, introducing them to or providing an *information delivery service* or a *knowledge sharing platform* to encourage these people in using ICTs and to stimulate the integration of ICT use into their lives is therefore important⁶.

3.4. The need for innovative technological solutions

Wougnet hosts a forum and a mailing list on their website to provide the means for people to share and access information and knowledge. They also try to maintain a database of documents, supplying users with relevant information. The activities of Warchild Holland mainly focus on providing the kids with basic email skills to communicate with each other. Even though these basic services (forums, mailing lists, email etc.) do provide the basis needed to bring information access and sharing through ICTs into their lives, the needs for *innovative and sustainable solutions* are still expressed to encourage ICT use more after training, to provide better means for accessing and sharing information, and to overcome the physical factors standing in the way. When I visited BOSCO in the Gulu district of Northern Uganda, I got an inside look on their approach in tackling the problems mentioned above in an innovative and sustainable way.

3.4.1. Innovative hardware

BOSCO stands for Battery Operated Systems for Community Outreach. They research, develop and implement *innovative and collaborative ICT technologies especially adapted for rural areas*, and especially designed to encourage ICT use and overcoming physical factors. Along with Kevin Bailey I visited the Coope IDP camp outside of Gulu to see the system BOSCO has set up. Upon arrival I entered the "office" equipped with a desk and a highly durable and low maintenance Inveneo computer. This machine was powered by a battery that was charged by a solar panel mounted on the roof. The computer was connected to the internet and an intranet through a WiFi system set up in the area. Next to the desk there was a telephone which used a VoIP (Voice over IP) system, making direct and free telephone communication between BOSCO stations and with the BOSCO staff possible. As I witnessed,

⁵ See appendix Table 1 for a collection of factors

⁶ I will come back on these issues later in the report

the solar panel and the battery solve the major electricity problem encountered throughout the country, at other organizations and at telecenters. The inveneo computer solves a technical/maintenance problem due to their low maintenance high durability character. The telephone allows for free and quick communication between organization and beneficiary allowing the organization to support its beneficiaries directly. And the WiFi system solves the problems of internet access, speed, costs and the absence of fibre optic cables. But, interesting to note is that during my visit at Coope, the internet connection was cut because the site manager, a community member working as volunteer for BOSCO, in that IDP camp couldn't raise and pay the money for the monthly internet fee. This makes clear that business skills are equally important to acquire as ICT skills, and social factors are equally important to overcome as physical factors in order to sustain such development projects locally.



Fig. X: WiFi Antenna attached to a water tower overlooking Coope IDP camp

3.4.2. Collaborative software

Next to providing hardware solutions, BOSCO also encourages the use of *collaborative web 2.0 software*. First they provide training to community members willing to participate. These people are trained to be trainers (this is the Train-the-Trainers or Teach-the-Teachers concept in which a trainee is encouraged to pass on his acquired knowledge and skills to a fellow community member) so they can train and guide others in their community. In this training basic computer skills are taught, but also and more interestingly the use of a *wikispace* is introduced⁷. This wikispace is the *knowledge and information sharing platform* where users of the BOSCO system can access, share and request information, report events, put project proposals online, discuss topics, connect and communicate with people (inter)nationally and simply just put their acquired skills into practice. Hereby leveraging the development of the people and communities BOSCO sets out to help in many ways.

⁷ See <http://bosco-uganda.wikispaces.com/> for the Wikispace

As an example, Alier David Martin, a pioneer at BOSCO, explained to me that people in the war affected and rural areas of northern Uganda have a strong need *to get access to justice*. On the way to or from schools girls are raped daily but they, their parents or other community members have no idea on how to report this, how to handle the situation and how to get justice. Therefore teaching them to use the technologies provided by BOSCO allows them to make reports of these situations, hereby they can get support. Next to that it will provide measurable data about these kinds of cases in rural Uganda, something that until now has been missing. “We would like this site to contain pages dedicated to facilitating contact with each of these areas as they come online: providing images, communication links, project ideas, etc. We want to build community, not just a computer network, with our brothers and sisters in these villages”⁸. I found this element, an *innovative web 2.0 platform that builds community*, to be an important missing link at ChangeIT!, Wougnet and WarChild.



Fig.X: Coope site manager using BOSCO’s wikispace on an Inveneo computer power by a solar charged battery and connected to the WiFi Antenna.

3.5. The need for content management and needs extraction tools

i-Network⁹ also hosts a *knowledge and information sharing platform*. They have built an online platform where development stakeholders and others interested in utilizing ICTs for development, can share knowledge and information with each other. Through a very active discussion board and mailing list, very much information, ideas, opinions etc. are expressed and a large community of people has been built¹⁰. Elisha Wasukira, a staff member of i-Network, described the work and the platform they are facilitating to me in detail. He told me that i-Network seeks to *provide advisory services* to people expressing needs through their web service. They also aim to *facilitate development processes* by bringing development stakeholders together and connecting one with the other. Out of all the information and knowledge shared on the discussion group, i-Network works to *extract*

⁸ Source: <http://www.bosco-uganda.wikispaces.net/>

⁹ The i-Network Website: <http://www.i-network.or.ug/>

¹⁰ Subscribe to this discussion group at <http://d2.dgroups.org/iicd/i-network/>

lessons, needs and other relevant information to be better able to assist in the above mentioned organizational activities. But, and this was the biggest challenge for i-Network that Elisha has expressed to me, the effective organization and management of all the knowledge and information generated through the platform is a large problem. Because of the structure of the discussion board and mailing list and the information “overload” generated through them, extracting and detecting the needs of the users and gaining significant insight in relevant discussed topics has been a painstaking process. The need for *effective content management and needs extraction tools* was expressed greatly.

What I learned was that to be an organization facilitating a knowledge sharing platform and working to address the needs expressed by its users and extracting valuable meaning from it, you *must* have a system structure that supports these activities technically.

3.6. Mobile phones to provide and gather information

As I continued my research, I met Jessica Osborn from AppLabs and Bas Hoefman from Text To Change. What these organizations were doing was researching, developing and implementing applications that use mobile phones and SMS as a medium to *provide and gather information* to and from the public. Jessica told me that giving people the possibility to access and share information digitally, requires using technologies that are already very prominent in society and penetrate the largest part of the population, which is very logical. In this case, which is the case for almost the entire continent of Africa, mobile phones are the communication devices owned in 2008 by 8,554,864 people which is equal to 30% of the entire population, thus being a digital gateway to the population for organizations that want to provide and gather information for development purposes and work to increase access to information for the empowerment of the population. By talking with Jessica and Bas I gained significant insights in *innovative mobile services and technologies which stimulate information access and development on a large scale* and how to best develop these applications. The next sub-chapter will report these findings.

3.6.1. Information delivery on demand

AppLabs, which works in partnership with Google and MTN Uganda, is carrying out various activities that embrace each other. Before developing mobile applications, they do extensive ethnographic and needs assessment *research*¹¹. The results of this research supports and guides the development of applications tailored to the needs of the would-be users. What their research has shown until now is that there is a high demand amongst the least informed people of the country for accurate, actionable and dependable information on health, agricultural, market, weather and transport issues. After acquiring these findings, AppLabs goes into a *rapid prototyping* faze in which they quickly develop and test *mobile information delivery applications* that cater for the demands and needs expressed in the research. The advantages of their mobile approach to improve information access is that people aren't required to have extensive computer or ICT skills, but make use of the devices and skills they already have. More importantly, information they seek is delivered to them *on demand* through an *automated engine*, meaning they don't have to be actively engaged in the exhaustive process of searching for the information themselves. Addressing to the needs of the user is automated instead of done by humans, as is the case on most web based knowledge sharing platforms discussed earlier.

¹¹ See appendix table 2 for a summary on the results of research conducted by AppLabs

Until now, AppLabs has developed five functional implemented applications. A *weather forecast application* with localized up-to-date weather information. A *clinic finder and health tips application* which facilitates a searchable directory of local health facilities and answers questions submitted through SMS concerning sexual and reproductive health. The “*farmers friend*” application which provides users (farmers) with information on the current market prices for their crops and agricultural tips and advice. And, a *trading platform* in the form of E-Bay, where people can put their items up for sale or find items that others are selling¹².

3.6.2. The need for open source software solutions

Like AppLabs, Text To Change also develops mobile applications built for the dissemination of information. By engaging people in an SMS based quiz, they spread information regarding health and HIV/AIDS issues. With this information the aim is to educate and sensitize the users on these issues and mobilize them to take physical actions in getting tested or seeking medical care. A major problem that Text To Change encounter is that mobile providers aren't equipped enough yet to provide the technical means to sustain *social SMS applications* or applications with extensive functionalities like *personalized information feeds*, and *interoperability* with knowledge sharing platforms. Developing and implementing these technologies is therefore strained. Because of this, the need is expressed to develop better *open source solutions* in the area of telecom and SMS applications. Hereby stimulating collaboration between organizations, broadening the domain of possible application and *extending the functionalities* to personalized and web based services.

Next to providing information to the users, the important factor of these applications is that through them calculable *data and information on the population is gathered*. This input serves as the crucial information on which the organization can act to improve their applications and services. This does lead back to the issue noted at i-Network that, within these types of organizations, there is a strong need for effective content management/needs extraction/data analysis tools. In the case of AppLabs, working together with Google provides a tremendous technological advantage because of the technological knowhow that Google possesses.

3.6.3. Scaling ICT and mobile phone use for development

AppLabs and Text To Change addressed the importance of scaling their technologies in order to stimulate information access and development on a large scale. This involves using large telecom companies as partners to get access to thousands of mobile phone users and partnering with major organizations as Google in order to address and solve technological issues concerning information delivery. But, even though a high percentage of the population uses mobile phones, its use (and the use of other ICTs) still hasn't penetrated the critical mass for these type of initiatives to lift up nationally. Using mobile phones and SMS as medium for information delivery, access and sharing, holds great potential for supporting national development, but as Daniel Stern from UConnect made clear to me, additional technologies and services need to be developed in parallel to these mobile applications.

Daniel explained his visionary solutions to two large problems he noted in rural Uganda, which will leverage the use of ICTs nationwide. The first problem being the lack and high

¹² View this channel for audiovisual information on AppLabs: <http://www.youtube.com/user/UgandaAppLab>

costs of electricity to charge mobile phones, and the second being that most people don't have bank accounts to regulate financial flows. By introducing low cost and highly durable *solar charges for mobile phones*, anyone can charge their phone whenever they like. Daniel showed me a prototype of a solar mobile charger he bought for 10 US dollars each. By dropping it a few times on the ground, connecting it to my phone to charge it and pouring water over it he demonstrated the functional use and durability of this device, especially for conditions in rural Uganda. Along with deploying the solar mobile charger, he explained that *mobile banking* needs to be available for everyone in order for them to have access to bank accounts and money wherever they go. This will stimulate financial processes, business and eventually the national economy.

Take the trading platform developed by AppLabs as an example. People could use this platform to buy or sell items from others. Through their mobile bank accounts they could have access to and transfer money, thereby easing the trading process. Another example could be that a person has set up a development project and relies on funding from an international source. Through a mobile bank account the international donor could transfer money and the project owner could access this wherever and whenever.



Fig. X: Daniel Stern demonstrates the use of his solar mobile charger prototype

3.7. Organizations as mediating organ

Two organizations I came in contact with, MCA and ICU, shared similar organizational properties. Both of these organizations were acting as the *mediating organ* between (international and local) development workers or organizations and community

development projects. I've come across interesting possibilities for their use of ICT. MCA offers local youth as well as international volunteers, the opportunity to contribute to community development through involving them in community projects and work camps, hereby aiming to enhance development work and international cooperation. ICU provides services to international organizations with development projects in Uganda and acts as a trusted partner between the organization and their project. They also provide a guesthouse for volunteers and travelers coming to Uganda, and host safari trips which support local community projects.

3.7.1. The need for an integrated web service for the mediating organization

Because of the characteristics of these organizations there is a strong *need to connect and communicate easily and effectively with people locally and internationally*. ICT tools and new media are very relevant in supporting this international orientation and the development cooperation characteristics of these organizations. I met Abasi Kanyike from MCU at a party in a Kampala nightclub, he told me of his organization and his problems. Because of the international orientation of his organization, he said his main problem was to find and connect to international volunteers willing to come to work with him. He knows there are many people in many countries willing to participate in activities organized by him, but finding them or them finding him has been a major challenge. Sander from ICU explained to me a similar situation. His organization is also internationally orientated, and the service he provides requires people from abroad to gain insight in activities happening on the ground in Uganda.

An *integrated web service* that links Abasi, Sander or other local development projects to the international worker/volunteer and the other way around, provides the technological means these organizations need to enhance their abilities and broaden their capacities. This service would work in two ways; providing the possibility for international exchange, funding and exposure for development projects on the one side and the means for monitoring, evaluating and advocating for development projects on the other.

3.8. The need for a centralized organization registry system

Finally I visited two CBOs called SOVCO and PGGOS which shared similar characteristics. The organizations were set up by good willing members of a community in a rural part of Uganda. Their activities involve improving the living situation and livelihoods of people within their community and have been established because of an observed situation on the ground which desperately needed attention; in these cases the well being of orphans and vulnerable children in the community. They are mainly characterized by providing physical development assistance without the use of ICTs or other technological methods. What I found interesting of these organization and what would be very valuable for my research was that these two CBOs didn't make use of ICTs what so ever for their development work (apart from typing project proposals with a spreadsheet and communicating through email). After visiting them several times to get insight in their needs and the possibilities for the use of ICTs for them, I gained significant insight in ICT tools that would be beneficial for them, their beneficiaries and many other grassroots organizations like them.

While talking with Tonny Opiyo (which has made me chairman to represent SOVCO in Holland) from SOVCO, and John Bosco from PGGOS a few points became very clear to me:

- They spend much time and energy looking for partners locally and internationally
- They spend much time and energy to find funding and donations for their organization
- There is a need to gain exposure about their activities
- They make no use of ICTs for their development work

These points, and the cases of SOVCO and PGGOS provided for me the means to connect the ICT solutions and applications mentioned in this entire chapter to each other, in order to form practical ideas for ICTs that encourage development cooperation.

Tonny Opiyo explained to me that he needed to register his CBO at a government official's office. All organizations in that region had to visit the same office for registration. It came to mind that there must be many organizations, just like SOVCO which are carrying out the same activities and encounter the same points I mentioned above. When Tonny explained to me this issue of registration, it occurred to me that a *knowledge sharing platform where organizations as SOVCO and PGGOS could register* would assist greatly. Through this platform their organization and its activities could get *exposure*. The platform would give *insight* in the whereabouts and activities of all organizations registered in a specific region. It would enable them to *find* each other and to *seek* partnerships locally. It would also be a gateway to gain international exposure and for finding funding. This service wouldn't have to be web based, if you take the applications developed by AppLabs into account. In their case of the 'clinic finder', an application could be developed that would give insight and information on other relevant organizations in the region instead of clinics. This application would then be made especially for NGOs or CBOs instead of directly for their beneficiaries.

Because these organization make no use of ICTs yet means that they most of the time also don't possess ICT skills. A skills training would then be beneficial to solve this issue. The knowledge sharing platform on which they register would also be a tool to assist in this. It would give them insight in other organizations, like Wougnet, ChangeIT! or BOSCO providing skills training near them. Because now these organizations have to register at a central point, this central point could be used for the organizations to engage with this system.

4. Conclusion

“a key principle required for any developing society, means that comprehensive, relevant and timely information should be accessible to all individuals in order to realise real social, economic and political development impact.” –Daily monitor may 9th 2007

This report has reflected on the findings and experiences I gained in Uganda in relation to my research question: “what are the challenges and opportunities for the use of ICT and New Media by local NGOs and CBOs in the field of international development cooperation”. I found that physical and social factors, which are summarized in table 1 in the appendix, are main challenges that organizations have to overcome in order to utilize ICTs and New Media for development purposes. The main approach taken in Uganda, and thus a much taken opportunity for NGOs and CBOs, is to set up telecenters and give skills training to overcome (ICT)illiteracy. I’ve found that to encourage ICT use and to integrate ICT use into the daily lives of people organizations have the opportunity to provide innovative hardware solutions in overcoming physical factors and web 2.0 software solutions to overcome social factors. Yet, the challenge these organizations then meet is managing the content generated and provided in their web service and to extract and address the needs expressed by users of their platform.

Mobile phones have shown to be a highly effective tool to provide and gather information to and from the public. Using mobile phones and SMS as a medium support information access and sharing is a great opportunity for NGOs and CBOs. Challenges standing in the way of realizing this are the development of the applications (many organizations don’t have the capacity or know how to develop, implement and utilize mobile information services), the technical capacity of major telecom providers (the providers have a limit in what type of applications and data traffic they can support, developing mobile applications is thus subjected to the technical capacity of the telecom provider) and the availability of open source applications (many organizations develop applications which could be perfectly used by other, smaller NGOs and CBOs but they tend to keep their applications proprietary). Bringing mobile phone use to more effective potential would mean further developing and utilizing mobile banking and solar chargers, another opportunity for NGOs and CBOs.

Another opportunity is that NGOs or CBOs become a mediating organ between development work and development workers. This service will go hand in hand with an integrated website through which communication and coordination should be possible. The challenge would be keeping the service up to date and developing the proper systems structure to support the service. Finally the need for a central (web)space where NGOs and CBOs are or can be registered in order for them to find each other and seek partnerships is expressed greatly. Developing this centralized organizations registry system has thus emerged as a usefull opportunity for organizations seeking to develop ICTs for development.

The findings have led to a list of important factors which need to be taken into account by the 1%CLUB when wanting to develop and implement its web service in Africa:

Opportunities

The ultimate solution? Extending your platform!

Platform where individuals can:

- Sign in
- Connect to each other
- Exchange information and knowledge
- Share their own information and knowledge
- Offer their own services
- Offer their products
- Request services/products
- Find volunteers
- Plot their geolocation on a map
- Use mobile phone connected to the online profile

Where organizations can:

- Put a project online
- Follow the update of the project
- Connect to neighbors
- Find partners
- Find/offer funding
- Find/offer volunteers
- Find development projects
- Plot their geolocation on a map
- Register centrally

Its capable of:

- Extracting needs
- Manage content efficiently
- Perform personalized searches
- Provide personalized feeds
- Matching automatically
- Integrated with mobile phones
- Providing localized up-to-date information on demand
- Functioning as a research tool for ethnographic research
- Enable financial flows

Mobile aspects:

- Direct upload of media
- Sms updates and alerts
- On demand information delivery
- Mobile activity linked to personalized web based page

5. Question and Answers

5.1. Anna



“Welke verrassende toepassingen van ICT ben je tegengekomen? Bijv. toepassingen die het mogelijk maken om een paar stappen over te slaan, zoals bankieren met je telefoon etc.”

“Welke uitdagingen, behalve de slechte toegang tot ICT ben je tegengekomen? Culturele belemmeringen om Internet te gebruiken, misverstanden etc. (bij wijze van spreken het met een pen schrijven op een computerscherm of zoiets...)”

1. What interesting ICT implementations did you encounter?

- a. **The hardware implemented by BOSCO** – BOSCO uses innovative hardware to provide people in the most impoverished and socially damaged rural areas of Uganda. This innovative hardware makes it possible to overcome physical factors like, internet connectivity and the availability of electricity. The adoption of similar systems will most likely provide the basic means for sustainable ICT projects in rural parts of the country.
 - ✓ Solar panels
 - ✓ Chargeable battery
 - ✓ VoIP telephone system
 - ✓ Inveneo computer system
 - ✓ WiFi Communication
 - ✓ Wikispaces
- b. **Solar mobile chargers** – very cheap device that comes equipped with connectors to provide power to every mobile phone available on the market. The widespread adoption of this device means that people can power their mobile phone wherever and whenever they want. This is good because the reliance on phone charging shops or the electricity grid is eliminated.
- c. **Applications developed by AppLabs** – AppLabs provides and gathers information to and from the public through its applications. These applications seem to carry a revolutionary element when it comes to providing people access to information. Developing such mobile applications should in my opinion be an example for other NGOs and CBOs seeking to focus their development work on providing and gathering information to and from the public.
 - ✓ Automated information delivery through SMS
 - ✓ On Demand information delivery
 - ✓ Scalable nationwide
 - ✓ Weather forecast
 - ✓ Clinic finder
 - ✓ Health tips
 - ✓ Agricultural tips

- ✓ Trading platform
- d. It's also interesting to note what interesting ICT implementations I expected to see but didn't encounter. Because of the high use of mobile phones in Uganda and the large focus within the development sector in stimulating ICT use, I did not find an organization that is developing a mobile phone application/service that is linked to a web based service. When visiting KIFAD, we did discuss the possibility, but I haven't seen it. What would be interesting is a service where information is provided and gathered through a mobile application, while this application is made interoperable with the web service. Think of the direct uploading of pictures from the mobile to a personal profile, an information feed coming from the web to the mobile and the other way around.
 - ✓ Link mobile phone activity to web based profiles
 - ✓ Uploading information from mobile to web
 - ✓ Receiving information from web on mobile
 - ✓ Subscribing and receiving information feeds
 - ✓ Open source applications for widespread adoption of technology

2. What alternative challenges did you encounter?

- a. **Mindset** – A challenge that I've encountered many times in different conversations is the mindset of the Uganda people. People tend to live a day to day life, in which everything they do is focused on getting through the day they are in. They lack long term vision and therefore easily drop back into their old patterns. This is an obstacle for organizations investing time, energy and money in people they hope to educate and help. Also they hold on to traditional beliefs and myths with as result that they won't open up for new possibilities and development.
- b. **Language availability** – Information, services and technological development in general is available mostly in English. Many local people only know their local language, making the access to valuable information and the use of development services harder for them. The availability of information and the provision of services in local language is therefore a challenge that must be overcome when wanting to reach those who only understand their local language.

5.2. Niels

"Yo yo yo,

Waar ik vooral benieuwd naar ben (en wat vaak als tegenargument gebruikt wordt) is de beschikbaarheid van internet. Vooral in rural areas. Hoe is de dekking nu? Wat zijn de verwachtingen? En welke oplossingen worden er nu gebruikt en kunnen nog gebruikt worden? En hoeveel mensen maken daadwerkelijk gebruik van mobile internet?"



3. What is the status on the availability of internet in especially rural areas, what is the coverage and what are the expectations?

The majority of people throughout the country get access to the internet by going to telecenters. Especially in rural areas access to internet is limited due to the lack of telecenters. In Gulu for example I visited an IDP camp where the nearest telecenter was about 15 kilometers away, meaning that people living in that village would have to travel to town to get internet access. The problem also is that the internet connection is really bad. In general it would take about 3 minutes for a website to load, meaning that after every click a user would have to wait 3 minutes. Opening an email inbox for example, reading emails and replying them is therefore very time consuming and above that expensive since users pay a fee for every minute or hour they make use of the connection. The hardware used is often of very low quality and power surges make for unreliable connections and power outages. There are cases like BOSCO where an innovative WiFi system is set up in rural areas, making fast internet browsing possible, but the actual amount of people benefiting from these type of projects doesn't weigh against the people not ever coming in contact with such projects. The fact also is that because of low bandwidth the internet providers can only provide slow internet. This situation is about to change due to the arrival of broadband internet in Uganda. But the lack of personal computers and the low amount of telecenters in rural areas still makes the status of internet availability in very low. Innovation in mobile internet access will lead to a higher ICT use and internet connectivity penetration.

4. How many people are actually making use of mobile internet?

According to a report released by the Uganda Communications Commission (UCC), there were 175,568 active mobile internet users in Uganda between January and March of 2008. These users accessed the internet through "data-enabled handsets" or "fixed wifi hotspots"¹³. Furthermore, great developments are being made involving 3G services and broadband solutions like "WiMax" and "SpeedMax". What is important to note here is that the wireless internet isn't available throughout the country, but only at the hotspots providing this connection, meaning users would have to be in range of the connection source to get access to it¹⁴.

¹³

¹⁴ For much information on the current state of internet in Uganda read this: <http://www.iicd.org/files/Booklet%20Inet.pdf> and <http://www.networkworld.com/news/2008/072808-mobile-internet-growing-in.html>

5.3. Dagmara



“How is the access to internet now? And how long will it take to develop so that everybody there can have access just as in Europe? What is being done now to improve it? What large projects are being set up to do this?”

5. How long will it take for the internet infrastructure to develop so that everybody there can have access just as in Europe?

New technologies are approaching fast, bringing internet access to larger parts of the population. Their access would differ greatly then in Europe, because of the lack of computers, laptops and the proper hardware. Mobile internet will lift off as smart phones will become more popular and the major telecom companies will provide internet solutions.

6. What large projects are being set up to do this?

Google is working together with major NGOs to gather data and information and is building systems to provide information access to everyone.

http://medioclubsouthafrica.com/index.php?option=com_content&view=article&id=1225:googles-sms-internet-for-uganda&catid=47:africa_news&Itemid=116

The Eastern African Submarine Cable System.

[http://en.wikipedia.org/wiki/EASSy_\(cable_system\)](http://en.wikipedia.org/wiki/EASSy_(cable_system))

SEACOM.

[http://en.wikipedia.org/wiki/SEACOM_\(cable_system\)](http://en.wikipedia.org/wiki/SEACOM_(cable_system))

5.4. Margreet & Bart

Margreet: “Ik vind het wel interessant om te horen hoe jij het voor je ziet als een medewerker van een NGO/CBO die jij hebt bezocht een projectvoorstel zou indienen op de 1%CLUB of deze persoon ook in staat is om maandelijks een update te geven; hoe gemakkelijk/moeilijk/kostbaar is het voor deze persoon om op het internet te komen en zou deze persoon ook via de mobiele telefoon deze update kunnen doen? De update houdt in: een stukje tekst op de weblog bij het projectvoorstel, een foto en/of een filmpje met tekst waarin uitgelegd wordt wat we zien. De inhoud gaat over de voorbereidingen op het project, andere activiteiten van de CBO/NGO etc.



Waar moeten we als 1%CLUB volgens jou rekening mee houden, wat zouden we nog meer kunnen ontwikkelen om dit gemakkelijker te maken en hoe kunnen we mensen het beste coachen zodat ze zien wat voor hun de meerwaarde hiervan is?”

Bart: “Ik sluit me aan bij de vragen van Margreet!”

7. How do you envision a person who you visited in Uganda handing in a project proposal at the 1%CLUB?

I’ve witnessed that locals working within the development cooperation sector have good skills in writing project proposals and spend much time and energy in finding funding or donors for these projects. There is a strong need for encouragement for these people to make efficient use of web based services. Writing and handing in project proposals would not be of great concern, but the harder part will be maintaining them according to the regulations. I envision a few problems standing in the way for them to optimally make use of the 1%CLUB web service. These problems relate not only to handing in project proposals but also maintaining them online:

- **Finding 1%** - It is of course important for these people to get to know 1%CLUB in order to hand in a project. Now the service is only available for them through Dutch representatives. They need the means to be able to make use of the 1%CLUB themselves. So targeting these local people directly should be high on the priority list.
 - ✓ Advertise in telecenters
 - ✓ Partner with local government where NGOs and CBOs have to register
 - ✓ Seek local partnerships and maintain relations
- **Language** – The service needs to be in English because this is the most general language spoken and written within development cooperation in Uganda. Developing a system that also supports information exchange in local languages will be of great advantage because larger parts of communities can be targeted.

- ✓ Allow multi languages
- ✓ Develop or utilize translation tools
- ✓ Be the framework not the content
- **Computer availability and internet access** – these factors are great obstacles for local NGOs and CBOs that would want to make use of a web based service like 1%CLUB provides. In the major cities and towns these problems play a smaller role, but especially in rural areas representatives from local NGOs and CBOs have difficulty in making use of the 1% web service because of these factors.
 - ✓ Anticipate mobile internet and use of smartphones
 - ✓ Anticipate innovation in technical capacity of telecom sector
 - ✓ Develop mobile applications linked to web based service
 - ✓ Provide training to NGOs and CBOs on maintaining projects
- **Uploading media** – Because of slow and unreliable internet connections users will have a hard time uploading media to the 1%CLUB website.
 - ✓ Develop/utilize applications for easy content uploading
- **Maintaining blog periodically** – Maintaining the blog can also become a problem, as I witnessed with Abasi Kanyike from MCA. He has put a project online at betterplace.org but as I monitor him making use of this service I see that there is no real consistency in using this web service. When the benefit of the service is not seen directly the motivation to make use of it will only get less in time.
- **Mindset** – the most common mindset of people in the development cooperation sector, and actually in the entire country, is to make money fast. Next to handing in a project proposal and maintaining the project online at 1%CLUB, these people will go on and find more donors and funding. The results of their project being online should, in this case, have a quickly noticeable impact. If this is not the case, the use of the 1%CLUB service will decline automatically. Personal contact with these people and daily/weekly encouragement in using the web service is therefore in my opinion important.
- **Bank accounts** – Having access to bank accounts is a noted problem in rural Uganda (I don't know if registered NGOs and CBOs are required to have bank accounts). So any donations or money transfers coming through the 1%CLUB web service might be hard to transfer to and access by the local representative of the project. Developments in mobile banking promise to provide solutions to this problem. Making the 1%CLUB service interoperable with a mobile banking system could be a promising future application for the 1%CLUB.
- **Connecting to possible partners** – The web service should allow its users to connect fast and easily with potential partners. Developing applications that assist in people finding others or information that could be relevant for them is therefore important. These applications should have an automated character, meaning that users should spend the least time searching and the most time finding, and that information relevant for them is delivered automatically to them.

8. How easy/hard/costly is it for this person to get access to internet?

In the major cities and most towns internet connections are available, yet the speed is slow, the equipment often in a bad state and the costs of the internet access is high. In rural areas internet connections are most of the time absent. As I witnessed in rural Uganda I envision

that the current state of technological infrastructure is a great obstacle for the effective use of the 1%CLUB web service.

9. Will they be able to give a monthly update?

As is the case for Abasi, giving a monthly update on betterplace.org is hard. Factors in this case are bad technological infrastructure, not seeing the direct benefits of giving a monthly update, not being encouraged by betterplace.org to do it and no ease in using the service.

10. Could this person also give updates through mobile phones?

Giving updates through mobile phones is a much desired situation from my perspective. As seen with Applabs, mobile phone use has penetrated the largest part of the country and people understand the utility of mobile phones. Making this possible is important for the 1%CLUB, therefore a focus must be put on developing applications that support this. Users should not only be able to upload textual updates and audio/visual media but should also get information delivered to them on request. By delivering information to them, they are automatically engaged with the 1%CLUB what will encourage them to make use of the service even more. Yet, as explained in this report, the telecom companies as of now lack the technological capacity to support social mobile applications or uploading media content to a web based platform. Partnering with major telecom providers and developing and utilizing open source mobile applications will be key points in improving the current situation and realizing the benefits of updating through mobiles.

11. What should 1%CLUB keep in mind?

- Money tends to end up easily in peoples pockets
- Extracting the needs of your users should be a high priority, developing needs extraction tools is therefore an innovative 2.0 application for the website
- Users should spend more time finding and less time searching when using your web service. Therefore develop personalized search, personalized information feeds, persons matching applications.
- Develop applications with a strong focus on their assisting capabilities in achieving goals and not for leisure.

12. What should we develop to make this process easier?

- Information delivery and communication system from web to mobile
- Information delivery and communication system from mobile to web
- Application for mobile banking to initiate financial flows
- Develop a persons matching application that matches people to each other according to specific traits
- Develop a system that allows international volunteers/organizations to find development projects and the other way around
- Enable for volunteers to advocate for development projects
- Make use of geo-tagging
- Develop a platform or directory of the locations of local NGOs and CBOs along with additional information on their needs and capabilities.
- Invest and promote alternative energy solutions like solar panels

- Develop a research department that conducts ongoing (ethnographic) research on needs and develop applications fast according to the results
- Develop a platform that enables trade, not only donations

13. How can these people be coached to see the added value of the service given to them by 1%CLUB?

- Develop a training program
- Advertise training programs in local telecenters
- Use a “teaching the teachers” model
- Link training to a practical situation, encourage the use of acquired training skills in daily life
- Provide help and support as service, let training not be a 1 time thing

6. Appendix

6.1. Table 1

Table 1: Factors straining development and ICT use			
Social	Physical	Educational	Organizational
Poverty	Poor transportation	Overcrowded schools	Poor coordination with government
Illiteracy	Poor communication	Limited educational resources	Poor coordination between organizations
HIV/AIDS and disease	Power surges	Under qualified staff	Corruption
Trauma	Poor healthcare facilities	Limited scholastic materials	Poor visibility and transparency
Violence	Inadequate water and sanitation	Poor ICT curriculum	Hard to get international exposure
Corruption	Inadquate market accesibility		Hard to find good staff
Low socio- cultural values	Isolation of communities		Lack of funds
Low level of education and expertise	Ineffective reporting systems		Poor documentation
Lack of life skills	Low access to justice		Inefficient equipment
Lack of business skills	High costs of services		
Negative stereotypes	Slow internet connection speeds		
Traditional beliefs and myths			

6.2. Table 2

Table 2: Research domain and results of AppLabs		
Research domain	Research results	Needs assessment
Rural livelihoods	Demand for dependable information	Demand for health <i>information</i>
Income generating strategies	Demand for actionable information	Demand for <i>agricultural</i> information
Mobile phone usage	Demand for accurate information	Demand for <i>weather</i> information
Information needs	High level of personal mobile phone ownership	Demand for <i>transport</i> information
Information opportunities	People understand the utility of owning a mobile phone	Demand for <i>market</i> information and access
Financial flows	People understand information in terms of advice and expect this advice to come from a human source	
Suitability of different information delivery services	People Are already using mobile phones to facilitate	

	financial flows, using the transfer of air-time as a virtual currency	
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6.3. Table 3

Table 3: Areas of opportunities for NGOs and CBOs		
Needs	Individuals	Telecenters
		Encouragement
		Innovative technological solutions
	Individuals & Organizations	ICT skills training
		Information Delivery Services
		Knowledge and Information Sharing Platforms
		Integrated web services
	Organizations	Content management tools
		Needs extraction tools
		Open source software solutions

6.4. Case studies

Group 1: Organizations providing physical assistance without the “ICT component”

SOVCO

Background

SOVCO (Support the Orphans and Vulnerable Children’s Organization) is based in the Ongako sub-county in the Gulu district in Northern Uganda. Where once an IDP camp of approximately 10.000 inhabitants was stationed, 65% have gone back to their home villages and the rest still reside in what is now called the county center. The war has left a wake of trauma and destruction behind, with many orphans who have lost their parents and many vulnerable children in desperate need of support and assistance. There is a large gap to fill, so SOVCO seeks to help not only these orphans in the community, but also wants to build and strengthen the capacity of the community at large.

Categories

Start-up rural organization
Empowerment
Social change

Activities

SOVCO has identified a broad list of action points. These points in a sense all relate back to the observed state of the community and the identified elements that need drastic improvement and change.

1. **Empowerment** – To build and strengthen the capacity of the existing constrained and disadvantaged local communities towards the empowerment of both the child boys and girls.
2. **Guidance** – To create and cater for the needs of girls through paying school fees, providing essential materials and many others like counseling and guidance to accord their persistence and performance in schools.
3. **Education** – Enhance family stability to ensure love and forgiveness as well as security for all the children.
4. **Gender equality** – To enforce and promote gender equality within the present societies at different localities.
5. **Disease** – To part in the prevention of sexual transmission of Human Immune Deficiency Virus like the HIV/AIDS through sensitization programs.
6. **Human Rights** – To advocate for both the children’s voice (rights) and the people living with HIV/aids in the region.
7. **Partnership** – To liaise coordinate with other organizations whose aims and objectives are similar as partners. The major aim is to strengthen and tighten the relationship and friendship both within and outside the country.

Challenges

The activities identified by SOVCO are still very broad and specific actions and result still haven’t been taken due to the young nature of the organization. Even though the field of actual activities is broad and not focused, the knowledge and understanding SOVCO has about the community, their needs and the challenges they face is very well defined.

1. **Getting into action** – the plan is there, the knowledge and understanding of what to do is available, yet the resources to lift the project off the ground lack, making it difficult to start their IGA (Income Generating Activities). SOVCO has as of yet no funders/donators/well-wishers supporting them, so their main focus is on getting that. As a consequence they say

“we cannot yet blindfold the community we are assisting”, meaning, they want to help and start implementing their actions, but due to lack of resources they can’t. This exemplifies the high reliability/focus on (international) donators.

2. **Traditional Mindset** – A traditional belief amongst the people is that when a kid is old enough it should focus on getting material gain for the family, therefore a high percentage of children drop out of school early, start working or step into early marriages. This belief hinders the development of present society, it causes low educational levels. It is a short term view for battling poverty, which keeps poverty existent and makes it eventually harder for the people.
3. **Corruption** – Starting up the organization is a pain staking process in which months pass where various documents need to be created and get stamped by local authorities. These authorities very often don’t follow procedures by law, and ask for sums of money in return for the authorized document. Multiple offices and people need to be visited and dealt with, meaning transportation costs and time grow larger. So the process of starting up the organization and getting all the legal requirements in place has been a major challenge for SOVCO.
4. **Computer literacy** – Computers are only used for writing documents and sending emails. Mainly communication and finding partners goes through personal contact. This is a time and money consuming process, that known, by SOVCO, could be changed using digital communication methods. Yet, the knowledge on using the computer and internet isn’t there, and many potential partners also lack this.
5. **Documentation** – Sad to say that death can be not only the end of a person’s life, it also means the termination of existing knowledge. With a large amount of knowledge and a high level of intellect among the members of SOVCO, the need to document this knowledge in order to pass it on to the next generation is high. Without proper documentation, all ideas, plans and knowledge could, in the worst case, be lost instantly. Eradicating high hopes, will power, a drive for success and a prosperous plan in its path. With an average life expectancy of 40, this is a serious problem to address.

Summary

- Education is needed within the organization to be able to make use of the known potentials of ICT
- Social reformation/change is needed to eradicate traditional beliefs that hinder the development of the people and community, changes in educational methods and forms might be a solution that approaches the problem at its roots

Need for

- Training and computer education for staff
- Central database for registration of NGO’s and CBO’s within the same region and field of action (ICT service at government level?)

Contact

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<http://ict4uganda.wordpress.com/2009/06/07/gulu-visit-ii-sovco-and-questioning-ict4d/>

PGGOS

Background

Patience Great Glory Orphanage School (PGGOS) is a community based organization localized in the Bbira community in Bulenga, outside of Kampala. At Bbira primary school the amount of orphans and vulnerable children are alarmingly high. Out of the 800 pupils attending the school, 360 are registered to be orphans or vulnerable children. Due to the lack of sufficient feeding, the lack of money, and poor parental guidance these children in turn tend to drop out of school quickly or don't come to school every day. PGGOS was set up to provide the disadvantaged children at Bbira primary with breakfast and lunches every day, with free scholastic materials and with school uniforms and shoes. Because of this intervention, school attendance is raised and a step in bettering the (future) living conditions of these children is set. Next to providing these materials, PGGOS also focuses on teaching the children vocational skills, which in turn leads to the income generating activities from which PGGOS gets its funding.

Categories

MDG 1: End poverty and hunger

MDG 2: Achieve universal primary education

Orphan support

Activities

1. **Re-enforcing and improving the current grain mill** to generate income as well feed children – To generate an income PGGOS has a grain mill with which the food handed out to the children every day is processed. Next to that people from the community can use the mill against a small fee to process their own garden grown foods. This fee is used as income to make the project self sustainable.
2. **Empowering teacher's capacity** and school management to deliver quality education – Dealing with a large quantity of orphans and vulnerable children implies that more focus needs to be put on acquiring basic life skills.
3. **Testing** HIV status of children, **counseling** and **providing** scholastic materials for the children – Many pupils and people of the community never got tested for HIV/AIDS. Due to stigmatization, ignorance, poverty etc. Many kids are infected and counseling them properly is important.

Challenges

1. **Sustainability** – PGGOS got financial support from a donor organization with which they bought the grain mill and a great sum of maize, with the intention to start generating income, but this income never came and now the food is almost finished and there's no income to buy new food. Focus lies on getting new donations, little focus is put in finding local solutions.
2. **Management skills** – There is a lack of management and/or business skills. The projects run by PGGOS are carefully planned with great ambitions and good care, but to effectively manage the projects has been a problem due, in part, by the lack of business and management skills.
3. **Amount of pupils** – Bbira primary school is a government aided school. Because of this the education is 'free' of charge and the school cannot deny access to education to children. This means that classrooms are over populated. Next to that, when the school is giving out free meals and scholastic materials, even more children will come, overcrowding the school as well as the domain of the projects completely.

Summary

- Caring for the basic life necessities of orphans and vulnerable children by providing food, scholastic materials, vocational training and guidance, which in turn raise school attendance and better their lives.

Need for

- Solid development plan for a self sustainable project
- Better cooperation with the Government
- Training and coaching in running an effective and self sustainable project

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Group 2: Organizations utilizing ICT for development purposes

KIFAD

Background

KIFAD sets out to support people infected with and affected by HIV/AIDS. It's a CBO that has been set up and is currently being maintained by the members of the community themselves. After experiencing the *socioeconomic* effects of HIV/AIDS in the community, its members felt the need for establishing a *proactive community* that addresses, and works to eradicate, these problems. Through guidance, counseling and home based care and support KIFAD stands out to challenge and respond to causes and consequences of disease, poverty and ignorance with a commitment to *mobilize communities to solve their own problems* and live with dignity.

Category

MDG 6: Combat HIV/AIDS and other diseases

Community empowerment and mobilization

ICT for Development

Activities

KIFAD consists of local and international volunteers that work together to accomplish the tasks KIFAD sets out to perform.

1. **Provide service** – There are many people living with HIV in rural areas. These people are often too weak to leave the house, they have no money for transportation to distant health centers, they have no money for medication and most of the time lack the information and knowledge about their disease and what measures to take. Therefore KIFAD seeks to care for and *support* these people through guiding and *counseling* them, either at their home, through mobile phones or at their office. By means of conversation knowledge is gained about the problems these people face and the needs they have. According to this, relevant information is provided to them and support is given through referring and directing them to the procedures that need to be taken to better their lives.

2. **Mobilization** – through guiding and counseling the aim is to mobilize the people infected and affected by disease to take action and start initiatives. Monthly group sessions are held where the community comes together to share experiences and draw plans to partake in activities and initiatives that will create awareness on HIV and “alliances” are created to generate income to alleviate poverty. (When visiting a community gathering one woman explained how, with the guidance and information referral service of KIFAD, she learned how to start a business selling stuff at the market, now she is generating income with which she can support her family, buy medication and live with better quality of life. It is this motivation and sharing of experience the community needs to get mobilized and start fending for themselves).

3. **Information distribution** – A large part of the community has no or little education. Therefore there is a high demand for information about various subjects like causes and effects of diseases, methods for starting business, methods for launching projects etc. Especially when alliances are made and initiatives are planned the need for “how to” information is big. Therefore KIFAD provides and distributes relevant and useful information to those who seek to learn about something. The office contains a few computers where digital information can be examined and a large paper based collection of folders, posters, handbooks, manuals, articles and other sources of information.

Challenges

Experience has shown that the people of the community often stumble upon the same problems and have to overcome the same challenges over and over again. Due to the nature of KIFAD and activities they focus on, overcoming these challenges mostly relate directly to the provision and use of new and locally innovative technological methods for information distribution and communication.

1. **Unheard voices** – The many HIV infected and affected people KIFAD works with want to share their experience, knowledge and understandings with the others. They have interesting stories to tell of survival and success that can help in guiding others. Yet, these people often live in rural areas, have no means of transportation to the rest of the community or are sick at home. Thus, telling and sharing these stories directly becomes a large problem. There is a high demand for mobile methods for sharing information and communication. Therefore KIFAD sees relevance in using *Social Networking Sites* for these people to connect with each other digitally, share and gather information directly in disregard of geographic location or time of the day. Next to that it allows for direct consultations and counseling to be done from a distance, thus saving on transportation costs to and from the people in need and time.

2. **(Computer) literacy and availability** – the idea is great, but actually mobilizing people to make use of ICTs is the largest hurdle to overcome. The largest amount of people haven't ever used a computer, they have no money to buy and sustain a computer, there is an electricity problem and most of the time see no *relevance* in using or learning to use one. Internet is also very expensive and doesn't often reach into the villages or outside of the city. Next to that there is a *language* problem to overcome, because the majority of the community only speak their local language, but the gross of digitally available information and services provided online are in English.

3. **Tele-centre** – KIFAD wishes to set up a tele-centre where *workshops* can be given in teaching the community to work with computers, and to integrate the use of computers into their lives. The tele-centre will create a computer literate community that can seek, find, create and share information individually, and it makes way for the utilization of ICT and New Media

to achieve the organizational tasks and goals. Yet frequent power surges and internet costs and availability remain problems in the realization of these plans.

Summary

- SNS for communication, sharing, information gathering and distribution, monitoring of personal status, reporting cases and needs, extending service
- Tele-centre for workshops, education, provision of information, literacy

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ChangeIT!

Background

ChangeIT! Has been set up with the mission to contribute to the sustainable development of Uganda by increasing the level of knowledge of its citizens. This is done by setting up (self sustainable) computer centers throughout the country where students and community members can be trained in computer skills and are given access to information and means of communication. Thereby improving their living conditions. Second hand computers are collected in the Netherlands and shipped to Uganda to become functional in the computer centers. Every year students from INHolland school go to Uganda to give workshops in using computers to schools and communities.

Categories

International Cooperation

ICT training

Activities

The activities of ChangeIT! are done as well in The Netherlands as in Uganda. The Netherlands is the main donor country. Here the supplies (hardware and software) are gathered and shipped to Uganda. In Uganda computer centers are set up and workshops are given. The aim is to make the computer centers self sustainable and income generating. Evaluation has shown that the main goal, to equip Ugandans with the knowledge to access information through the use of computers, is met for 100%. A summary of the activities carried out by ChangeIT! in Uganda:

1. Introduce ICT in Schools and Communities
2. Build Capacity on ICT use for schools and Communities / Organizations
3. Improve the level of ICT in existing Computer laboratories in Schools / Communities
4. Maintenance of computers and computer network
5. Allow Students of the school to receive free education
6. Provide computer tables
7. Provide an internet connection for a minimal (in accordance with the market) fee
8. Provide commercial training to non-students for a minimal fee
9. Provide secretary services for a fee in accordance with the market

10. Provide printing and copy service

Challenges

While visiting ChangeIT! in Kampala a few challenges were discussed.

1. **Dumping** – When the first load of computers arrived in 2005, many computers were equipped with Pentium I processors, weren't functioning properly or were completely worthless. Therefore restrictions have been set to the import of materials of pre defined quality.
2. **Transport** – Transporting the equipment is very costly. The transport cost from the Kenyan coast to central Uganda is very high and the transport itself is very difficult.
3. **Power** – The telecenters are often set up in rural areas not, or poorly, connected to the electricity grid. The standard solution to this problem is to operate using generators, but the costs for the generator fuel surpasses the income generated by the telecentre. "It's useless to give technology or setup a project when there is no power coming to it".
4. **Provision of Internet** – If internet is available it is very expensive and in most cases unaffordable.
5. **Sustainability** – If there are no clients there is no income, this is very hard to achieve because people often lack the money and the knowledge to pay for or make use of the internet.

Summary

- Self sustainable computer centers and -training to give Ugandans access to digital information, using secondhand computer hardware from the Netherlands

Need for

- Low cost energy sources like solar panels
- Computer technicians
- Extended service – ChangeIT! provides workshops to farmers where they teach them to use the internet to gather and access valuable information on market prices, farming methods etc. Yet there is no service that assists farmers in finding each other or a service that channels the information they need to them.

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WOUGNET

Background

WOUGNET (Woman of Uganda Network) is an NGO initiated by several woman organizations in Uganda to develop the use of ICTs among woman as tools to share information and address issues collectively. As stated, their goal is to "improve conditions of life for woman by enhancing their capacities and opportunities for exchange, collaboration and information sharing". Over the year WOUGNET has grown into one of the most prominent ICT for Development movements in Uganda with many programs and projects completed and an extensive online information resource.

Categories

Activities

Wougnet focuses on three main areas:

1. **Information sharing** – This program is set up to support improved information access by woman in rural and urban areas in Uganda. While the focus is primarily on the use of ICTs and internet based technologies, WOUGNET also looks at how these technologies can be integrated with traditional means of information distribution like community radio, citizen journalism, video, printed materials and telephones. The advantage here is that it's possible to work with local languages. Other projects include setting up tele-centres and community centres.
2. **Training** – WOUGNET members often get the possibility to follow a training in using ICTs for sharing information, reporting stuff, accessing information and networking with others.
3. **Networking** – WOUGNET hosts a forum and face to face meetings for woman who want to discuss topics involving the use of ICT for sustainable development.
4. **Gender and ICT policy advocacy** – In Uganda there is a tendency for woman to lag behind current developments underway. WOUGNET takes a stand for these woman by addressing their special needs and advocating these needs in the development of policies etc. For example when setting up a new telecentre in a rural village, WOUGNET placed it right next to the market where most of the woman of the village spend their days, hereby increasing the easiness for them to make use of it. Next to that WOUGNET focuses on providing these woman with specific information that should be relevant for them.
5. **Technical support** – WOUGNET has this program to help woman with their technical problems and strategically apply appropriate technologies to tackle issues at hand. Under this program fall the following activities:
 - a. Access to technology – research is done on new types of hardware and software that can be applied to fit the needs of WOUGNET members.
 - b. ICT training – Training in ICT is given to increase the capacity of woman in using ICTs
 - c. Tech Support – hands-on technical support
 - d. Tech Tips – question and answer in the light of ICT

Challenges

1. **Education divide** – in Uganda there is a large education divide between boys and girls. Girls are more likely to drop out of school to start working for the family at home or on the land. Overcoming this divide is a focus point for WOUGNET, because it will mean better educated woman and a more prominent role for woman within the Ugandan society.

Summary

Supporting woman through the use of ICTs

Need for

- Interactive website
- Web 2.0 functionalities to increase information access and dissemination
- Mobile phone service for community outreach
- Mobile phone application for citizen journalism

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Warchild

Background¹⁵

The general aim of the program is the improvement of the psychosocial well-being of children and youth who have been affected by the conflict in Northern Uganda. To achieve this goal, War Child is dedicated to help empower the children and youth of the region and to offer an environment where they are able to receive support and can live together peacefully. War Child will focus on the four program areas psychosocial support, child-protection, education and peace building.

“we believe that the use of ICTs and media tools by the youth would make them more informed, more instrumental, productive and useful to their societies. So the youth use knowledge gained to shape their experiences, inform their friends and societies on peace issues, be good agents for peace and create peace awareness generally in places they live and elsewhere”. –Opita James, ICT Manager WarChild Holland

Categories

ICT4Peace

Activities

WarChild Holland conducts various programs in Uganda. One of which is called the ICT4Peace program. With this development plan, ICTs and media are utilized to grant children in the war affected areas of northern Uganda increased access to education. With these programs WarChild has noted that a shift occurs in the mentality of the participating youth; access to ICT and education increases the own will to learn and go to school. And a considerable decrease in violence and drug and alcohol use was noted. The ICT4Peace program consists of:

1. **Telecentres** – in multiple communities and areas throughout northern Uganda telecentres have been set up. The youth is then encouraged to make use of these telecentres for educational purposes. And training is given in ICT skills.
2. **ICT4Peace teams** – community members are empowered to become peace volunteers. Teams are established in the communities to promote peace and the use of ICT.
3. **School holiday programs** – with the resources of WarChild Holland, holiday programs are set up in the telecentres. Here the youth can follow a training and gain significant ICT and life skills. Out of 30 young people who followed these programs, 15 have gotten jobs soon after following them.
4. **Debate** – WarChild Holland works hard to link their technical services, like discussion boards, forums and other communication channels to real life debate and education.
5. **Grassroots idea** – thanks to the trainings given by Warchild, some community members started their own grassroots business. This was to buy a large television screen to show important soccer matches. Members of that community would have had to walk for hours to the nearest town to watch them, now they can do it in their own village. Thanks to the telecentre and the internet this was made possible.

Challenges

1. **Power** – many communities where WarChild Holland operates in Uganda aren't connected to the power grid. Providing the telecentres with the needed electricity is thus a costly problem. Power is most often provided by generators which consume petrol. It is the cost of petrol that gets really high. Using solar panels has been a solution to this problem. No more petrol costs, and next to that also income from phone charging activities.

¹⁵ Source: <http://www.warchildholland.org/index.php?paginaid=231&contentid=888>

Summary

- Telecentres for education and the promotion of peacebuilding amongst war affected youths through ICT

Need for

- Cheap energy source like solar panels
- Educational models

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Group 3: Organizations researching, developing and implementing ICTs

BOSCO

Background

After 22 years of war in Northern Uganda, peace is on the horizon and the hundreds of thousands Internally Displaced Persons (IDPs) are slowly moving back to the homeland villages. The war has left many people dependant on humanitarian aid resources, but now, progress must be made to turn this dependency back into self-advocacy. BOSCO sets out to do this through the use and implementation of innovative and collaborative ICT technologies especially adapted for rural areas¹⁶. In multiple IDP camps BOSCO has implemented highly durable communication stations consisting of solar powered and battery operated 'Inveneo' PCs connected to high-speed and long-range WiFi internet connections. Next to that every BOSCO station is connected to each other with a free VoIP telephony system and intranet. With these technologies the aim is to empower the war-affected communities in Northern Uganda, and contribute to their increasing information and communication needs.

Category

MDG 1: End poverty and hunger

MDG 2: Achieve universal primary education

MDG 8: Develop a global partnership for development

ICT for Development 2.0

Training the Trainers

Activities

BOSCO Uganda provides "innovative ICT solutions using a collaborative, web-based approach to foster social and economic development and peace building in rural communities in Northern Uganda"¹⁷. Next to setting up the technological infrastructure, the organization focuses on, supports and facilitates a variety of strategic programs through which they tend to accomplish their goals.

- 1. ICT and Computer Education for rural communities** – Through workshops and a Teaching-the-Teachers program BOSCO works to increase computer literacy in and improve the collaboration between schools, institutions and communities. Providing (computer) education to the people is of utter importance since the use of and knowledge about computers and the internet is still extremely low. At every site, volunteers are recruited and trained in using the system. Next to that they are encouraged in passing on their

¹⁶ BOSCO Uganda, Strategic plan 2009-2010

¹⁷ BOSCO Uganda, Strategic plan 2009-2010. Mission statement.

accumulated knowledge to others, thereby exponentially increasing the amount of capable users. A digital “wiki-space” acts as the domain of the online activity of the BOSCO system users, where topics can be discussed, personal pages can be made, information can be exchanged, collaboration can take place, news can be posted and read, and to be held programs/activities can be advertised¹⁸.

2. **ICT for human rights and peace building** – Reportedly there is a lack awareness on human rights issues within the communities in Northern Uganda. Due to the high amount of school dropouts and the overall low level of education, people lack knowledge about their basic human rights. Next to that the access to justice is a major problem, and the incident reporting system is ineffective. Because of these issues, violations are poorly documented and therefore necessary actions cannot be taken and justice cannot be served. By empowering the people through ICT they get access to information on their rights, access to justice and reporting violations is made possible. Next to that BOSCO volunteers get a role in guiding and monitoring the community.
3. **Research and installation of innovative ICT technologies for rural areas** – Researching the status on the ground gives insight in possible technological innovations and implementations. This is a bottom up, demand driven approach, where the technology used is costumed to its users. Infrastructures throughout the entire country (and the entire world) are very different, therefore the installed technology needs to be tailored to the environment its implemented in.
4. **Research and concept development for “ICT in development”** – This implies identifying the aspects which need or hold back development, and locating where ICTs could play a role for improvement. By mapping these implementation areas, general concepts for the use of ICTs within development can be developed and policies can be better defined. This also forms the basis for organizational development and growth.

Challenges

BOSCO Uganda has already been operational for some years now. The project they are undertaking has passed several implementation stages. These trajectories to implementation have brought light on many problems they face and many factors that need to be taken into account when carrying out ICT4D projects like this.

1. **Competition** – A large telecom company in Uganda (MTN), has taken equipment BOSCO has installed onto a telecom mast on top of a hill in the region. They argued that BOSCO would be competing with their business and would be taking their clients. Negotiating with them has been extremely hard. Yet, the presence of BOSCO only encourages people to start using computers and start gaining computer skills, thereby getting internet access almost for free. Due to high prices the telecom company charges for internet access the chance that these potential users BOSCO is supporting will start using computers and getting computer skills are really slim.
2. **Sustainability** – Every site has to pay a monthly fee for sustaining the internet connection. Responsibility is left to the site manager for paying this fee. Income Generating Activities (IGAs) like asking a small price from people wanting to use the internet, or charging mobile phones for some money are methods for raising these fees. But these measures seem not to be working efficiently at every site. Managers would also need business skills for generating

¹⁸ Wiki-space location: <http://bosco-uganda.wikispaces.com>

income to sustain the BOSCO site. Next to that the technology is very durable and low maintenance, making the sustainability problem solely the generation of income.

3. **Dependency (maintenance and technical knowledge)** – at the moment the maintenance and the technical support of the site relies on (western) professionals, meaning there is a dependency on external human resources like technical staff and advisors.
4. **Transparency and Visibility** – BOSCO is undergoing a large project that connects multiple communities with each other through digital means, but there is a limited amount of knowledge about similar ICT projects, as well as in the region as out of it. A large number of NGO's and CBO's are active in the same region and often pursue the same goals. Working together might bring more fruitful outcomes, but transparency on the activities of other organizations in the same region and the visibility of the existence of these organizations is lacking.

Summary

- Web 2.0 for collaboration, education, sharing, information gathering and distribution, monitoring of project, monitoring of human rights, reporting of violations
- Battery operated solar powered Wireless computer system to surpass infrastructural problems, distance

Need for

- Central database for registration of NGO's and CBO's within the same region and field of action (ICT service at government level?)
- Inter-organizational collaboration platform on a multidisciplinary and global scale

Contact

<http://www.bosco-uganda.org/>

<http://ict4uganda.wordpress.com/2009/03/23/battery-operated-systems-for-community-outreach-in-uganda/>

<http://ict4uganda.wordpress.com/2009/06/05/gulu-visit-i-bosco-and-ict4d-in-rural-uganda/>

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AppLab

Background

AppLab is an initiative of the Grameen Foundation that seeks to transform lives through innovation in information access. In partnership with Google and MTN Uganda, AppLabs tests, develops and scales mobile phone (SMS) applications to promote social and economic empowerment for poor communities that lack access to critical information. They aim to develop “creative solutions to challenging problems” from a *user-centered technology-focused* development approach. Their research has shown that the mobile phone holds great potential to improve the livelihoods of the Ugandan people because a large percentage of rural villagers are already making use of it. Through

SMS the phone can be used as the tool for providing and collecting information that in turn helps both beneficiaries as the institutions providing help and support.

Categories

Mobile for development (m4dev)

Activities

AppLab is carrying out various activities that connect and embrace each other. Through research, prototyping and testing, insight is given in the information needs and demand of the people in rural Uganda. This in turn guides the development and engineering of mobile applications and new business models.

1. **Ethnographic research** – in order to develop mobile applications tailored to the needs of the people in rural Uganda ethnographic research is conducted by which AppLabs seeks to deeply understand the needs of these people. The focus is on their:
 - a. rural livelihood
 - b. income generating strategies
 - c. mobile phone usage
 - d. information needs and opportunities
 - e. financial flows
 - f. suitability of different information delivery services.Study has shown that people living in rural Uganda¹⁹:
 - a. Demand information that is dependable, actionable, and accurate
 - b. Use mobile phones to reduce the cost of transportation and other transaction costs associated with trade
 - c. Have a high level of personal mobile phone ownership
 - d. Understand the utility of owning and using a mobile phone
 - e. Understand information in terms of advice and expect this advice to come from a human source
 - f. Are already using mobile phones to facilitate financial flows, using the transfer of air-time as a virtual currency
2. **Needs Assessment Research** – this quantitative research focuses on how users employ mobile phones, it explores user preferences for information delivery and services and assesses the perceived value of potential mobile phone applications. Study has shown that there is a high demand for health, agricultural and transport information.
3. **Rapid prototyping** – this is conducted to quickly assess an application’s potential. Through rapid prototyping the end-user experience is observed and recorded from the introduction to the technology to the reaction on its workings. This in turn assists the application design and is used as input for the development of the product.
4. **Concept testing** – by equipping entrepreneurs in rural Uganda with high-end technology AppLabs seeks to assess and employ new business models enabled by these technologies.
5. **Application development** – knowledge gained through research, testing and prototyping makes way for the development of mobile phone (SMS) applications tailored to the needs of the end-users, driven by highly local information that is accessible on-demand. By SMS-ing keywords to a short-code information will be supplied to the mobile phone. Applications developed include:
 - a. **Weather forecasts on-demand** – this service provides localized up-to-date weather information that supports people in making well informed decisions. Partnership has been setup with the Ugandan Department of Meteorology.

¹⁹ Source <http://www.grameenfoundation.applab.org/section/ethnographic-research>

- b. **Clinic Finder and Health Tips** – this service educates users by answering questions concerning sexual and reproductive health. It also facilitates a searchable directory of local health facilities so it's easy for users to find proper medical assistance.
 - c. **Google Trader and Farmer's Friend** – these services provide users with information on market prices and gives agricultural tips and advice. It also includes a bulletin board where buyers and sellers find each other. This makes that the middleman is cut out of the chain with more money in the hand of the farmers.
6. **Community Knowledge Worker (CKW)** – by identifying, recruiting and training community members in rural Uganda to make use of the technological capabilities developed at AppLab a distributed network of partners can be built. This will stimulate as well as the provision of information as the collection of it. Information is supplied to end users and information is gathered from them. This supports system improvements and localized information availability.
7. **Beliefs worth noting** – given the function of the technologies AppLab is engineering strong beliefs are expressed about its impact on society
 - a. "Widespread adoption of farmers friend will lead to lower transaction costs, greater efficiencies and higher price transparency across various markets, bringing increased incomes to smallholder farmers".
 - b. "Scaling the application nationally across Uganda will lead to increased knowledge of farming techniques and more informed agricultural decision making based on access to weather information".

Challenges

1. **Language of available information** – many people in rural Uganda prefer receiving information in their local language, yet the availability of digital localized information in that language is still very low. In this sense the language of the service is a barrier for the widespread adoption of the technology
2. **Gathering information** – gathering and collecting situational information before the technology actually lifts off is costly and time consuming. Linking databases and getting a steady and reliable source for input information is in this sense a challenge. Plus the input must be there before the output can be generated, the system learns and the database grows when its usage increases.
3. **Linking with markets** – Farmers have the problem that they are not well informed about market prices and trade possibilities. They are not well linked with markets. AppLab bridges this gap by providing direct information on these issues.
4. **Mindset** – study has shown that people are more likely to pay for an information service if they see a tangible result and can benefit directly. They are not likely to pay if the service provided is focused on future results and benefits that take time. Because of this the services, applications and technologies must be applied in line with this mindset.

Summary

- Promote social and economic empowerment for poor communities through providing on-demand access to localized information mobile phone and SMS based applications
- Combining research, prototyping and testing with application and service development.

Need for

- **Registration system** – AppLabs is looking for partners, organizations and people who can help extend the developed systems and can help with the information input; data collection and analysis. Many people and organizations in the rural areas are looking for these opportunities, yet it's hard for these two forces in search for each other to find each other. A

registration system, possibly in the form of a networking application, could bring a higher degree of situational and activity awareness. Thus supporting them to find each other and to extend the impact of the project further.

- **Location tracker & plotter** – when accessing or requesting information it would be beneficial to know the exact geographic location of that user. This provides relevant geo-information for research but people close to each other or requesting the same type of information could be linked.
- **Measurability** – because services and application implemented by AppLab must be measured according to its impact and effectiveness and must be linked directly to the provision of information that supports people in rural Uganda, certain applications or services cannot be built. As an example a reporting system could be designed where cases could be reported by users. But because the impact and effectiveness of such a service is not directly measurable and the benefit of the information is not direct for the people themselves, it could not be developed by AppLab.

Contact

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Google SMS prototype

<http://www.google.com/mobile/products/sms.html#p=default>

iNetwork

Background²⁰

I-Network was established in 2002 with the aim of providing a platform for development stakeholders to share information, stories and lessons learned in the implementation of projects using ICT tools in Uganda. I-Network envisions a society that is able to equitably tap the socio-economic benefits of the information age through the use of Information and Communication Technologies. They provide a platform for sharing knowledge and information on applying ICT for equitable national development as well as influencing and supporting ICT policy development and implementation in Uganda.

Categories

ICT4D

Knowledge sharing

Development assistance

Activities

Major activities I-Network is carrying out include:

1. **Knowledge Sharing** – I-Network has built an extensive knowledge sharing platform through the provision of knowledge sharing seminars, publications, website and a mailing list. The mailing list is a very active discussion group where major stakeholders in ICT related issues come and share their experiences and thoughts. This has grown into a very active community of people working across all sectors, but mainly the ICT and development sector in Uganda. From time to time seminars are organized in order to facilitate face to face communication on topics discussed online.

²⁰ Source: <http://www.i-network.or.ug/what-we-do.html>

2. Provision of **advisory services** in the use and harnessing of Information and Communication Technologies – I-Network holds much knowledge in the use of ICT. Therefore they offer advisory and assisting services to people or organizations that see a need in using or harnessing ICTs.
3. **Capacity building** in Information and Communication Technologies – work is done to bring people together and share their experience and knowledge. This information is channeled and used for capacity building in ICTs. I-Network monitors the needs of the stakeholders and the public carefully in order to come up with or provide new and innovative technologies that can be used for the greater good. This capacity building is focused as well on issues within the organization, like the extraction of relevant information, as outside the organization, like assisting in project implementation etc.
4. **Process facilitation** using the round table process for project design and development – with the knowledge within the organization i-Networks brings together stakeholders in processes for project design, and also assists and advises on relevant topics and issues.
5. **Extraction of lessons** learned during and after project implementation using participatory feedback methodologies – participatory feedback is very relevant in gaining first hand qualitative information on situations. By sending people into the field and participating in the projects, the look and feel of the project is experienced firsthand.

Challenges

1. **Organization of information** – Hosting one of the most active discussion groups in east Africa, I-Network has its hand full in organizing all the information passing through their system. They have the strong need for effective tools that assists in structuring comments and replies on the discussion board. Next to that they want to extract relevant subjects and issues to act further on them, yet they don't have the capacity yet to do this effectively.
2. **Needs detection** – Allot of consumer, public and stakeholders' needs are expressed on the i-network discussion list. Detecting al of these needs so effective action can be taken remains a problem.
3. **Capacity development** – there has been a very low uptake of web 2.0 tools by members of the dgroups list as well as people within the organization itself. Reason for this is that people lack the competence to use these tools, so they just simply don't. Next to that, because of low bandwidth people are discouraged to make effective use of online tools and are limited to its use because of the amount of time and effort that needs to be put into it. Because of this bandwidth problem the critical mass cannot be mobilized.
4. **Uneven national development** – i-Network has witnessed an uneven development in the country; in Kampala the level of development is higher than in the rural areas. People are better educated and technology is better used and more prevalent. Therefore there is a problem when addressing the need for peer learning and knowledge sharing beyond Kampala. The largest percentage of the population is yet to be reached through digital communication means.
5. **Getting more projects** – getting projects makes the organization grow. But getting projects has been a problem. No projects means no business.

Summary

- Using digital communication methods for knowledge sharing, then acting on the input information by extracting needs and opinions.
- Linking people and development concepts to each other and providing advisory and technical support.

Need for

- Playing a bigger role in policy making – using intellectual property and stakeholders tactically in order to have an influencing effect in policy making on a national level
- Collaboration with the government – working alongside the government is a painful process, collaborating with them is needed for a higher uptake of development initiatives.
- Mechanism to mobilize people in the network – what to do with all the information and people in the network? Web 2.0 it!
- Real time information sharing and social applications – extending the platform into a real time active knowledge sharing application

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Text 2 Change

Background

Text to Change is an NGO based in Holland and Uganda that harnesses the powers of mobile phone technology by using it as a medium to communicate health related issues and to support existing prevention campaigns. HIV/AIDS is a very prevalent disease in Uganda. With the belief that people need to be well informed about issues concerning the disease, Text to Change started the SMS/quiz campaign to try to reach the under informed population and provide them with beneficial information that supports in health related issues. Next to that these campaigns also intend to motivate people in seeking medical assistance. All together, the TTC project provides a solid base for communicating relevant knowledge to the masses, educating the nation and fighting disease strategically. By seeking a broad range of partnerships and redeveloping their software in open-source they expand the range of possibilities and thus the impact the program can have nationwide (and even continent- or worldwide).

Categories

ICT4D

Mobile health (mHealth)

Activities

- 1. SMS campaigning** – in partnership with MTN Uganda, TTC has done pilot projects in which health information was given to participants of the SMS quiz that took a few weeks. In this campaign participants received information on health issues, got the chance to win stuff, and were motivated to seek medical assistance or go for HIV/AIDS testing. The pilot proved successful with a registered higher rate of people coming into the medical center for testing.
- 2. ICT systems development** – TTC develops its own software and hardware. Because the software used for the project needs to be custom made and tailored to fulfill its function, TTC works together with local programmers to build localized software.
- 3. Data analysis** – TTC collects vast amounts of data during the SMS campaigns. This data and statistics hold relevant information about the regional population where the campaigns are carried out. When analyzed knowledge is created that can be beneficial for understanding current states and changes in the population. It becomes visible to what type of questions people give most answers, what the behavior difference is between men and woman or different ages, and if a marketing tool influences the amount of participants.

Challenges

- 1. Participation of local NGO's to the text messaging programs** – local NGO's have a low capacity to bring innovation into practice. They rely mostly on the government or international funding from donor countries, and hereby either focus all their energy on getting that funding or they implement innovative projects very slowly.
- 2. Available platform of mobile providers** – mobile providers aren't equipped enough yet to provide the technical means for social SMS applications. Innovation in this area is going very slow and its estimated to take a long time before all telecom companies can make social SMS-ing possible.
- 3. Funding** – getting long-term funding for the activities TTC is carrying out is a problem.

Summary

Need for

- Better open source solutions in the area of telecom and SMS. Application and software built now is mostly proprietary within NGO's. Going open source means better collaboration between organizations.
- Acknowledgement of the mHealth development strategy by the governments so projects can be carried out from the ministry of health.
- Lower costs of sms
- Getting noticed by larger worldwide organizations

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<http://ict4uganda.wordpress.com/2009/03/31/text-to-change-spreading-the-message-to-stop-the-virus/>

Group 4: Organizations acting as the middleman/mediator between the developed world and development projects

ICUganda

Background

ICU (International Contact Uganda) is an initiative set up by two individuals who felt the strong need to help Ugandans improve their own lives themselves, after having witnessed the atrocity of poverty and disease in Uganda first hand. By supporting local communities and working closely together with these local people, ICU hopes to support people in bettering their own lives. What started as a small project which felt like the right thing to do, has now grown into an ever increasing organization that supports development projects set up by individuals, that supports communities in Uganda and that acts as a mediator between people in the Netherlands and projects in Uganda. And above all ICU sets a prime example for an effective, new and positive approach to international development.

Categories

International Cooperation

Activities

ICU is a growing organization based in Kampala at the moment and carries out multiple activities:

1. **ICU Foundation** – The ICU Foundation's main focus point is to start and/or support small development projects in Uganda. A primary school has been set up in a rural village outside of Kampala. This school allows for local kids to get proper education. A clinic has also been set up at this location, this provides the community with healthcare. Finally, a grain mill has

been sponsored to the school to process rice and maize. This provides daily school meals and some income to make the project sustainable.

2. **Grain mills** – ICU has donated two grain mills to two communities in Northern Uganda. The locals here can now process and sell their own foods, instead of walking hours to the nearest mill with a heavy load of food.
3. **ICU Service Center** – Based in Kampala is the ICU Service center. The service center provides services for NGO's based in Holland or individuals setting up development projects or doing volunteer work. For NGO's in Holland development projects in Uganda can be monitored, hereby ICU acts as a trusted partner. To volunteers and individuals with development projects ICU can provide guidance in setting up the projects and assists these people in anything possible. Furthermore workshops and courses are given in project management, bookkeeping, communication and policymaking. All these activities raise income for the projects ICU is carrying out.
4. **ICU Guesthouse** – Next to doing development work and lending services, ICU has a guesthouse that accommodates volunteers and development workers in Uganda. Providing these people with shelter proves to be a valuable way to gain personal contacts, to broaden the network and to increase knowledge sharing and accumulation.
5. **ICU Grassroots** – A new and responsible service has been setup by ICU. Having noticed that many travelers, volunteers and development workers want to enjoy their time off in Uganda by traveling through the country, ICU has set up a safari trip that takes travelers to local communities and visits various development projects throughout the country. The travelers can then see firsthand the situation on the ground in the rural areas and are encouraged to work together with these communities. Also exchanges are organized between different people working in different places in the country, so they can visit each others' projects and learn from each other.

Challenges

- Government cooperation – like many other NGO's noted, working together with government officials and ministries can be a major setback.

Summary

- Acting as a mediator/reliable partner that monitors projects, to NGO's or individuals with development projects in Uganda
- Providing a guesthouse for volunteers and development workers in Uganda
- Supporting local communities by investing in education and engaging western travelers with these communities

Need for

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MCA

Background

MCA (Music and Culture in Africa) is an NGO based in Kampala which aims at promoting *community based development, intercultural cooperation and youth participation* through *voluntary work*. This is

done by offering the local youth the opportunity to contribute to community development through involving them in community projects, work camps and international volunteer exchange. As their philosophy goes, “Together we Discover”; “involving youth can make a difference in development, bridge gaps between people, enhance cooperation and break down institutional barriers”. Local as well as international volunteers are encouraged to engage in the work camps organized by MCA throughout the year, hereby contributing to international cooperation for community development in Uganda.

Categories

Volunteer work

Community development

Sensitization through cultural activities

Activities

MCA is functioning as a host for international volunteers coming to Uganda for volunteer/development work. The activities and the subject of specific projects can vary according to the need of the community where the work will be done.

1. **Mission** - MCA Mission is engaging youth in projects that empower training, *sensitizing* and making them *aware* of topical issues of HIV/AIDS, gender, democracy, conflicts, reproductive health, drugs, cultural heritage through sports, games, music, dance and drama and forum theatre, debates, talk shows, public dialogues, seminars and workshops.
2. **Aims and objectives** -
 1. To promote the disadvantaged musicians and their respective cultures.
 2. To provide skills to the disadvantaged youth, to encourage their talents and culture.
 3. To enable the members of the project to acquire various skills and knowledge from other people from different parts of the world.
 4. To help the youth to alleviate poverty by engaging them in productive cultural activities like music, dance and drama.
 5. To reduce the practice of misunderstanding between different cultures by making youth realize the difference in cultural practices.
 6. To encourage the dynamic age group (youth) to take leading roles towards development.
 7. To promote and improve natural and acquired skills useful to the community.
 8. To promote and exchange cultures, to create friendship and mutual understanding.
 9. To contribute to the development of community based social services.
3. **Work camps** – Work camps, which are small community development programs, are organized regularly throughout the year. In these camps volunteer work is done by local and international volunteers. Volunteers are asked to pay a sum of money in order to participate. This money will be used for their transport, their accommodation, their meals and for some things in the work camp. Every work camp has a project name and a specific theme. These themes can vary and cover subjects like community HIV sensitization, construction of facilities, culture and environment conservation and the promotion of cultural activities.
4. **STV's** – Short Term Volunteer programs are small projects in the form of work camps which last about three weeks. They are in the form of a fun and engaging experience of cultural exchange and community development for the volunteers.
5. **MLTV's** – Mid to Long Term Volunteer programs aim to provide work camps to volunteers willing to work on projects for 3 months or longer. During these projects volunteers get deeply immersed in the Ugandan culture due to working with locals daily and stay with local families and/or guesthouses. In these projects MCA partners and cooperates with other organizations and institutions in order to do work collectively.

6. **Hosting** – MCA hosts (international) volunteers and acts as a mediator between them and the projects/Ugandan culture.

Challenges

I got a text message from Abasi Kanyike with the request to meet in order to discuss some problems he was having with his NGO MCA. When discussing, the conversation immediately lead to the website built for MCA.

1. **Website** – The major problem was that a lot of money has been paid to a local web developer to build the website, but the final product was a horrible website with dead links and invalid information. The developer didn't want to repair the problems and didn't want to give access to the back end of the website. So finding reliable web developers and not falling victim to these scammers is a major problem for locals with minimum to none computer knowledge.
2. **Computer and internet access** – Access to computers and the internet is very limited for the MCA staff due to the infrastructure in Uganda. Computers are not owned and are most often used in internet cafes or cyber cafes. These computers are very slow and not reliable. Next to that the internet connection is very slow, allowing only a few webpage views in a long time. This is a strain to web surfing and web activity, and also costs alot of money.
3. **Computer literacy** – Volunteers from abroad have advised MCA to put a project online at <http://www.betterplace.org>. On this website projects are displayed to the public in order to get funding from individual donors throughout the world. Yet, Abasi, the front man of MCA, has had a very difficult time maintaining the project online and getting the most out of the service. Writing blogs and updating the project is made difficult dominantly by the *level of understanding* the service and the *speed* with which the website can be navigated. Using betterplace.org implies mobilizing people to support the project and to advocate for the project, but when the actions that need to be taken to do this are not understood, or are obstructed by infrastructure, the service seems to become non-useful.
4. **Connecting to volunteers** – While MCA is an NGO that centralizes around volunteer work, finding and connecting to these volunteers proves to be a major challenge. When computer literacy is low and with a low level of help and involvement from (corrupt) government officials or third party organizations, attracting international volunteers is hindered greatly.

Summary

- (International) Volunteers are encouraged to take part in work camps for community development and cultural exchange.

Need for

- Website or web service which acts as a portal between people looking for volunteer work in Uganda and the work camps organized by MCA
- Service which allows NGO's and CBO's to gain (international) exposure at the point of registering their organization officially.

Contact

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